What is claimed is:

1. A multi-path searching device comprising:

a despreading unit for despreading received I and Q signals;

an accumulator for accumulating the I and Q signals;

a beam-forming unit for beam-forming the I and Q signals;

an energy detecting unit for detecting a larger energy value between the energy values of the I and Q signals respectively; and

a control unit for comparing the larger energy value with a threshold and setting a corresponding signal of the larger energy value as a decision variable, if the larger energy value is greater than the threshold.

2. The device of claim 1, wherein the beam-forming unit comprises a plurality of beam-forming means.

3. The device of claim 2, comprising a plurality of antennas, wherein the beam-forming unit comprises as many beam-forming means as the plurality of antennas.

4. The device of claim 2, wherein the beam-forming means is a switched beam-forming means.

5. The device of claim 2, wherein the plurality of beam-forming means are arranged in parallel.

6. The device of claim 2, wherein each of the beam-forming means

comprises a plurality of fixed-beam beam formers.

7. The device of claim 3, wherein each of the beam-forming means comprises a plurality of fixed-beam beam formers, wherein number of the plurality of fixed-beam formers is approximately equal to number of antennas.

8. The device of claim 6, wherein at least one of the fixed-beam beam formers outputs a beam-formed I signal by adding a value obtained from multiplying an accumulated I signal by a predetermined weight vector for an I signal to a value obtained by multiplying an accumulated Q signal by a predetermined weight vector for a Q signal.

9. The device of claim 8, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a value obtained from multiplying the accumulated I signal by a predetermined weight vector for a Q signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

10. The device of claim 9, wherein at least one of the fixed-beam beam formers obtains said beam-formed I signal $b_I^{(X,p-1)}$ and said beam-formed Q signal $b_Q^{(X,p-1)}$ based on the following:

$$b_I^{(X,p-1)} = Y_I \times W_I^{(X,p-1)}(\theta) + Y_Q \times W_Q^{(X,p-1)}(\theta) \quad ; (X = 0, 1, 2, 3, \ldots, P-1)$$

$$b_Q^{(X,p-1)} = Y_I \times W_Q^{(X,p-1)}(\theta) + Y_Q \times W_I^{(X,p-1)}(\theta) \quad ; \quad (X = 0, 1, 2, 3, \ldots, P-1)$$

, wherein the $W_I^{(X,p-1)}(\theta)$ denotes a weight vector for an I signal of X^{th} fixed-

beam beam former included P^{th} beam-forming means, and the $W_Q^{(X,p-1)}(\theta)$ denotes a weight vector for a Q signal of X^{th} fixed-beam beam former included P^{th} beam-forming means.

11. The device of claim 8, wherein at least one of the beam-forming means respectively adds the beam-formed I signals and the beam-formed Q signals outputted from the fixed-beam beam formers to respectively produce an added I signal and an added Q signal.

12. The device of claim 11, wherein in said at least one beam-forming means respectively outputs the added I signal and the added Q signal.

13. A multi-path searching method comprising:

despreading received I and Q signals;

accumulating the despread I and Q signals respectively;

splitting the despread I/Q signals by a plurality of beam-forming means;

performing a beam-forming for the split I/Q signals;

detecting energy of the beam-formed signals to find a largest energy value;

comparing the detected largest energy value with a threshold; and

setting a corresponding signal of the largest energy value as a decision variable, if the largest energy value is greater than the threshold.

14. The method of claim 13, wherein the I and Q signals are received via a plurality of antennas, and wherein the number of the beam-forming means is approximately equal to the number of the antennas.

15. The method of claim 13, wherein the plurality of beam-forming means are arranged in parallel.

16. The method of claim 13, wherein the beam-forming means is a switched beam-forming means.

17. The method of claim 13, wherein each of the beam-forming means includes a plurality of fixed-beam beam formers.

18. The method of claim 14, wherein at least one of the beam-forming means comprises approximately same number of fixed-beam beam formers as that of the number of antennas.

19. The method of claim 17, wherein each of the fixed-beam beam formers outputs a beam-formed I signal by adding a value obtained by multiplying the accumulated I signal by a predetermined weight vector for an I signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for a Q signal.

20. The method of claim 19, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a value obtained by multiplying the accumulated I signal by a predetermined weight vector for a Q signal to a value obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

21. The method of claim 19, wherein at least one of the beam-forming means respectively adds the beam-formed I signals and the beam-formed Q signals outputted from the fixed-beam beam formers.

22. The method of claim 21, wherein at least one of the beam-forming means respectively outputs the added I signal and the added Q signal.

23. A multi-path searching device comprising:

a despreading unit for despreading received I and Q signals;

an accumulator for accumulating the I and Q signals;

a beam-forming unit comprising a plurality of beam-forming means each comprising a plurality of fixed-beam beam formers for beam-forming the I and Q signals;

an energy detecting unit for detecting a larger energy value between the energy values of the I and Q signals respectively; and

a control unit for comparing the larger energy value with a threshold and setting a corresponding signal of the larger energy value as a decision variable, if the larger energy value is greater than the threshold.

24. The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers outputs a beam-formed I signal by adding a first value to a second value.

25. The multi-path searching device of claim 24, wherein the first value is obtained by multiplying an accumulated I signal by a predetermined weight vector for an I signal.

26. The multi-path searching device of claim 24, wherein the second value is obtained by multiplying an accumulated Q signal by a predetermined weight vector for a Q signal

27. The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers outputs a beam-formed Q signal by adding a third value to a fourth value.

28. The multi-path searching device of claim 27, wherein the third value is obtained by multiplying the accumulated I signal by a predetermined weight vector for a Q signal.

29. The multi-path searching device of claim 27, wherein the fourth value is obtained by multiplying the accumulated Q signal by a predetermined weight vector for an I signal.

30. The multi-path searching device of claim 23, wherein at least one of the fixed-beam beam formers obtains a beam-formed I signal $b_I^{(X,p-1)}$ and a beam-formed Q signal $b_Q^{(X,p-1)}$ based on the following:

$$b_I^{(X,p-1)} = Y_I \times W_I^{(X,p-1)}(\theta) + Y_Q \times W_Q^{(X,p-1)}(\theta) \quad ; (X = 0, 1, 2, 3, \ldots, P-1)$$

$$b_Q^{(X,p-1)} = Y_I \times W_Q^{(X,p-1)}(\theta) + Y_Q \times W_I^{(X,p-1)}(\theta) \quad ; \quad (X = 0, 1, 2, 3, \ldots, P-1),$$

wherein the $W_I^{(X,p-1)}(\theta)$ denotes a weight vector for an I signal of X^{th} fixed-beam beam former included P^{th} beam-forming means, and the $W_Q^{(X,p-1)}(\theta)$ denotes

a weight vector for a Q signal of X^{th} fixed-beam beam former included P^{th} beam-forming means.

5